

Beta Carotene Extraction:

Materials Needed:

DH5α *E. coli* Cells having already expressed Beta Carotene
LB
Centrifuge
Antibiotics
Eppendorf tubes
Pipets

Protocol:

1. Grow 100ml of *E. coli* at 37C with induction of plasmid capable of expressing Beta-carotene at OD600 of ~0.4.
 - a. If plasmid constitutively expresses beta-carotene do not induce.
2. After 24 hours of growing at 37C, pellet the cells by centrifugation at 4000rpm for 20 minutes.
 - a. Make sure to take a measurement of the OD600 for use at a later time point.
3. Discard the supernatant and resuspend the cells in 5mL 100% acetone.
4. Heat in water bath at 50C for 10min to lyse the cells
5. Vortex the solution to homogenise, followed by centrifugation at 14,000 rpm for 1 minute
6. Collect supernatant and measure absorbance at 456nm.
 - a. Normalize the absorbance measurement to cell density (OD600)

References

1. Adopted from iGEM Cambridge 2009 protocol for beta-carotene Isolation